CHAPTER 6

INSPECTION AND ACCEPTANCE OF DATA

A. GENERAL

1. Data delivered by DoD contractors is made up of many forms of recorded information. This information consists of products such as drawings, plans, reports, specifications, digital data bases, and computer software documentation. All DoD activities are responsible for ensuring that the data ordered and paid for under a DoD contract is actually received and available when needed. Therefore, DoD activities must have procedures for technical validation, inspection and acceptance of this data and must implement these procedures using technically qualified personnel and equipment appropriate for the task.

2. The FAR (reference (j)) requires that DoD acquire equipment and supplies, when possible, through competitive procurement. To meet these requirements, the Government must develop and maintain adequate data to permit effective competitive procurement. Government design activities generally develop and maintain data to support their system design, and are in the best position to produce timely, reliable procurement data packages to satisfy Government needs. However, when the Government acquires procurement data from contractor design activities, the Government must review the data received to ensure that it is complete, accurate, and adequate for its intended use. The QA requirements of the DFARS, Subpart 246 (reference (b)) apply to data products as well as to hardware products and services acquired by the Government. As described, both the Government and its contractors have responsibilities for inspecting data during its preparation, as appropriate, and for ensuring its acceptability in its final form.

B. CONTRACTOR RESPONSIBILITIES

The contractor is responsible for establishing and maintaining effective procedures for implementing and maintaining quality control of data consistent with the complexity of the data requirements and the provisions of the contract.

1. QA Functions. Normally, each contractor has an established quality system in place for ensuring quality products. The quality system is usually based on requirements such as MIL-I-45208, MIL-Q-9858, DoD-STD-2168, MIL-T-31000 (references (v) , (w) , (x) , (m)) or a commercial equivalent. When these requirements are imposed contractually, the QA functions listed below summarize some of the key requirements for an acceptable quality system.

a. The contractor should provide and maintain a quality system that will ensure that all data submitted to the Government for acceptance is technically correct and conforms to contract requirements. Statistical process control techniques should be included as an integral part of the contractor's quality system in consonance with total quality management. These techniques should be used as a means of fostering continuous process improvement and to provide information on which to make decisions about corrective action and change procedures. This requirement applies to data procured from subcontractors or vendors, as well as the data generated or processed by the prime contractor.

b. The contractor should perform or have performed the inspections and tests required to substantiate the quality of the data throughout all areas of contract performance, e.g., generation, validation, packaging, and delivery.

c. The contractor's quality system procedures should be made available for review by the Government before

starting data preparation and throughout the life of the contract. The quality system should be prescribed by clear, complete, and current instructions and include criteria for approval and rejection of data.

d. Personnel performing quality functions shall have well-defined responsibilities, sufficient authority, and the organizational freedom to evaluate data quality and identify problems, and to start, recommend, or direct corrective action.

e. The contractor's management activity should review the status and adequacy of the quality system-and the quality program regularly to ensure that correct technical data is being generated and delivered to the Government. This management review should also ensure full compliance with specific contract requirements especially in the area of rights-in-data, both proprietary and other.

f. The contractor's quality program requirement's should ensure compliance with procedures governing the preparation, marking and control of technical data in accordance with contract requirements.

2. Corrective Action Procedures. The contractor should take prompt action to correct conditions that have resulted, or could result, in data being submitted to the Government that is not in conformance with contractual requirements. Corrective action should include, as a minimum:

a. Review of existing records indicating the types and number of inspections made, the types and number of deficiencies found, items of data rejected, the corrective actions taken, and the quantities of data items approved.

b. Review and revision, where necessary, of existing procedures for conducting follow-up actions to monitor the effectiveness of corrective actions to prevent the recurrence of discrepancies.

3. "Certification of Technical Data Conformity". The contractor should complete the "Certification of Technical Data Conformity" when the DFARS, Subpart 252.227-7036 (reference (b)) is required by contract and identify, by name and title, each individual authorized by the contractor to certify in writing that the technical data is complete, accurate, and complies with all requirements of the contract. The authorized individual should be familiar with the contractor's technical data conformity procedures and their application to the technical data to be certified and delivered.

c. GOVERNMENT RESPONSIBILITIES AND FUNCTIONS

1. The Government is responsible for administering all acquisition contracts. This function is accomplished in the Department of Defense by the DCMC. Contract administration automatically carries with it the authority to perform all of the normal functions of a CAO as listed in the FAR, Subpart 42 (reference (J)). Some of the functions related to data acquisition that the CAO performs are as follows:

a. Ensuring that the contractor complies with contractual QA and warranty requirements.

b. Maintaining surveillance of contractor engineering efforts and management systems including those that relate to data control systems.

c. Evaluating these engineering efforts and management systems for adequacy.

d. Evaluating and monitoring the contractor's procedures for complying with contract requirements regarding restrictive markings on data.

e. Ensuring submission of required reports.

f. Reporting to the PCO any inadequacies noted in the contractor's performance of the contract, including its requirements for technical data.

2. Government personnel responsible for the inspection and acceptance of technical data on all acquisition . contracts should be aware of the following:

a. Acceptability of technical data delivered under a contract should be in accordance with the appropriate contract clause and the DD Form 1423. The "Certification of Technical Data Conformity," clause at DFARS, Subpart 252.227-7036 (reference (b), should be included in solicitations and contracts which include Subpart 252.227.7031 of reference (b). Note that the "Certificate of Conformance" found in the FAR, Subpart 52.246-15 (reference (j)), is not a substitute for the "Certification of Technical Data Conformity." Rather, it is used when authorized in writing by the contracting officer and allows the contractor to ship supplies for which the contract would otherwise require inspection at the source.

3. The DoD Components are responsible for ensuring that a prompt review and approval or rejection of submitted data is provided, that contract data items requiring preparation of a DD Form 250 have been inspected and accepted and that all deliverable data items meet contract requirements. Guidelines for inspecting and accepting deliverable data items are provided in sub-parts 42.3, 46.4, and 46.5 of reference (j) and Subpart 246 of reference (b)-.

4. Data managers should consult with the contracting office to determine if a particular procurement of

commercial items, commercial computer software, or commercial computer software wi 11 be made under the procedures in Subpart 211 of reference (b) . When this is the case, those procedures have precedence over other procedures and clauses in references (b) and (j) - The procedures under Subpart 211 of reference (b) affect the Government's data inspect ion and acceptance f unct ions.

D. TYPES OF DATA REQUIRING INSPECTION AND ACCEPTANCE

1. Specific inspection and acceptance criteria for contract data items are provided in block 7. of the DD Form 1423. Government inspection and acceptance is required for TMs, TDP elements, and other data which will be used by DoD Component personnel for the installation, operation or maintenance of equipment or software. Some of the factors to be considered in the inspection and acceptance of this data are the following:

a. TMs.

(1) The Department of Defense requires both mi 1 it ary and commercial TMs, using two different acquisition strategies. TMs that support items designed and manufactured predominately for military purposes are procured using a DD Form 1423, which lists the applicable specifications and standards that provide the required data preparation, validation, and verification instructions, or refers to an attached TMCR document, which provides all required instructions. The TMs that support items designed and manufactured to commercial specifications are first evaluated to the requirements of PIIL-M-7298 (reference (Y)) to determine the suitability of the TM for use in a military environment. Based on this evaluation, commercial TMs are procured using a DD Form 1423 and the appropriate DIDs listed in reference (y) . When procuring military or commercial TMS, the program manager, with assistance from appropriate technical personnel, is responsible for selecting the specifications, standards, or DIDs to be

applied under the terms of the contract. I f a commercial TM is being acquired under the procedures in the DFARS, Subpart 211 (reference (b)) , in-process inspection of the TM may not be permitted.

(2) Part 9 of DoD Directive 5000.2 (reference (f)) requires that TMs be validated for accuracy, comprehensibility, completeness and for operational usability against the related equipment or system by the contractor. Validation is conducted at the contractor' s facility or at the operational site and, unless otherwise agreed on by the DoD Component, involves the hands-on_ performance of operating and maintenance procedures including checkout, calibration, alignment, and scheduled removal and installation instructions. The contractor validation will be witnessed by the DoD Component representative unless, under unusual circumstances, validation by other means is agreed on by the DoD Component. The DoD Component will verify operational suitability against the production version of the equipment or system. Cent ract requirements must define the contractor's and DoD Component responsibility in the validation and verification schedule.

(3) Besides validation and verification, TMs should be sub jetted to in-process reviews and acceptance. During the preparation of the TM, the DoD Component conducts in-process reviews to provide guidance to the contractor, ensures that the TMs conform to contract requirements, and review the validation and verification plan schedule. Due to interdependent relationships between critical data products, coordination of the DoD TM and TDP review and acceptance act ivit ies should be accomplished. In-process reviews may be conducted at the contractor's facility or at the subcontractor's or other source facility while the TM is being developed and before the contractor prepares the final version.

(4) Procedures shall be established to apply configuration control to TMs to ensure that timely issuance of changes and revisions reflect engineering changes, that new instructions resulting from equipment and system modifications are issued concurrently, and that illustrated parts list used in repair procedures are updated.

b. TDP S .

(1) The Department of Defense currently requires that TDPs conform to the requirements of MIL-T-31000 (reference (p))-

(2) Inspection and acceptance of the TDP elements shall be subjected to Government reviews in accordance with Part 9, Section B, of DoD Directive 5000.2 (reference (f)). Basic procedures for inspecting and accepting TDP's are provided in section E., below, of this Chapter.

E. PROCEDURES FOR INSPECTING AND ACCEPTING TDPS.

1. The process of inspecting and accepting TDPs shall be a systematic series of actions beginning at contract inception and ending with the acceptance of the TDP by an authorized Government representative. The principal phases of this process are contractor indoctrination, in-process reviews, audits, final reviews, technical approval, and inspection, and acceptance or rejection. These phases should include initiation of contractual enforcement actions for nonperformance or lack of progress where appropriate.

a. Contractor Indoctrination. Before the contractor begins developing data; i.e., usually within 60-90 days after contract, a data guidance conference should be held. These milestones will normally allow significant time for the contractor to identify the personnel that will be responsible for preparing and submitting the data. The data guidance conference is a joint Government-contractor review of the contractual data requirements to ensure that

the contractor understands his contractual obligations, and to review the contractor's approach to satisfying those obligations. The data guidance conference may be held in conjunction with other contractor guidance and introduction conferences, e.g., the post-award conference. It is highly recommended that the contract contain a requirement for the contractor to support this conference. The format for the conference is not as important as the topics to be discussed. As a minimum, the topics provided below should be addressed. These topics will enable both parties to understand the Government's intended use of the data being procured. The conference is an opportunity to resolve differences of interpretation and provide alignment of the contractor's current TDP preparation systems with the Government's TDP requirements. Finally, the conference allows the Government the opportunity to ensure that the contractor understands that all technical data presented to the Government for acceptance shall be accurate, clear, complete, current, and adequate for intended purposes. Further, all topics discussed during the conference should be documented in a set of minutes and any areas not resolved or that require changes to the contract should be brought to the attention of the appropriate Government program manager and the PCO. The minimum topics for the conference are as follows:

(1) The CDRL requirements, the applicable DIDs, specifications, and standards, and applicable tailoring.

(2) Data review requirements and schedules.

(3) Data delivery requirements and schedules.

(4) The contractor's drafting practices and data formats .

(5) The contractor's numbering system for its drawings, part numbers, and engineering documentation.

(6) The contractor's QA procedures on data, including quality control of subcontractor and vendor data.

(7) The contractor's data rights marking procedures and policies.

(8) The role of subcontractors or vendors who will deliver data under the contract.

(9) The contractor's configuration management system, including methods for releasing data, approving data, and incorporating changes into the data.

(10) Identification of contract end items and the data trees associated therewith.

(11) The contractor's organization for developing, releasing, and controlling data. For data in digital form, include data update and transfer methodologies and identification of data exchange protocols used by the contractor.

(12) Review samples of data, if available.

(13) Other topics for discussion are identified in MIL-HDBK-288 (reference (z)).

b. <u>In-Process Reviews and Audits</u>.

(1) In-process reviews and audits shall employ a structured and disciplined approach of monitoring contractor data preparation to ensure that the TDP is evolving satisfactorily and that no unnecessary restrictions are being placed on its ultimate use. Maximum use shall be made of evaluations performed by Government personnel for other purposes, and of conducting in-process reviews in conjunction-with other reviews to reduce duplication of effort. For example, when possible, in-process reviews for engineering data should be conducted in conjunction with the

formal design reviews and/or audit processes prescribed by DoD-STD-973 (reference (g)). Specialists knowledgeable in the use of data and in TDP preparation shall perform the in-process reviews. The step-by-step procedures for the in-process reviews shall be determined by the reviewing activity in coordination with the end users of the data. The following sample guidance is provided for use:

(a) Pre-review preparation:

1 Select the Government review team.

2 Provide the following information to the Government review team:

a The purpose of the review.

b The time and place of the review.

c If the TDP will be provided to a Government site for review.

d Contract requirements.

e Intended use(s) of the TDP.

f Identification of the review team.

3 Arrange meetings and/or reviews

a Notify the contractor.

b Ensure data is delivered or accessed on time.

c Brief the team on the review procedures,

c Discuss corrective action procedures with the review team.

(b) Conduct In-process Review (IPR)

1 The requirements of contractually imposed documents such as MIL-T-31000 (reference (P)) and applicable DIDs will be used to evaluate the data presented for review. Government- or contractor-developed checklists and MIL-HDBK-288 (reference (z)) may be used as guides in conducting the review.

2 Document each deficiency found in the data. Prepare discrepancy sheets to document the findings of the IPR.

3 Consolidate the IPR findings.

4 Discuss the IPR findings with the contractor to ensure a mutual understanding of data deficiencies identified by the IPR team.

(c) IPR follow-up:

1 Forward the consolidated IPR findings to the PCO .

2 The PCO formally submits the IPR findings to the contractor for corrective action.

(2) Consideration shall be given to the amount of data to be reviewed, delivery schedule, and availability of equipment and personnel to perform the review. In-process reviews shall:

(a) Be coordinated with the appropriate DCMC or designated Government activity representative and the . contractor.

(b) Be conducted at a location consistent with the Government's objectives.

(c) Occur at intermediate stages during TDP preparation as required to evaluate data, ensure incorporation of requested corrections, answer questions, and provide guidance.

(d) Be used to assess contractor responsiveness, and, if appropriate, instigate contractual remedies for contractor or lack of progress.

(e) Be used to notify other functional data activities of potential impact caused by defective TDPs.

(3) predetermined acceptable quality levels may be used by the Government for TDP acceptance. All data for an entity (such as a specific system) should be 100 percent complete and inspected before acceptance. No data shall be accepted with known errors or deficiencies.

c. Final Review. The TDP shall not be accepted until a final review has been performed. As a minimum, final reviews shall:

(1) Be conducted after completion of the in-process reviews and the functional configuration audit.

(2) When applicable, be integrated with physical configuration audits (PCAs) meeting the criteria of MIL-STD-973 (reference (g)).

(3) Verify that engineering decisions or changes resulting from PCAS have been accurately incorporated into the TDP.

(4) Serve as the basis for acceptance or rejection of the TDP.

(5) Include a top-down-break-down (TDBD) completeness review, to ensure that all documents cited or referenced in the TDP have been furnished as part of the TDP. Specifications and standards identified in the Department of Defense Index of Specifications and Standards (DODISS) and industry association specifications and standards are not required to be submitted as part of a TDP. MIL-HDBK-288 (reference (z)) may be used as a guide in performing the TDBD.

(6) Verify that discrepancies previously documented during the in-process review have been corrected.

(7) Include a review of the TDP to ensure its adequacy for its intended use.

(8) Require Government receiving activities to:

(a) Review data for legibility. The TDP prepared by the contractor in hard copy form shall possess the quality that, when reproduced or microfilmed, will produce copies conforming to the legibility requirements of MIL-M-9868, MIL-D-5480, and MIL-M-38761 (references (aa), (ah), and (at)) as required by the contract.

(b) Review microfilm per reference (ah) and aperture cards of hard copy documents for conformance to format and coding requirements of MIL-STD-804 (reference (ad)), as required by the contract.

(c) The TDP prepared by the contractor in digital media shall conform to the requirements of MIL-STD-1840, to MIL-D-28000 for Computer Aided Design (CAD) data files, and to MIL-R-28002 for raster image files (references (se), af), and (ag)) as required by the contract.

(d) Establish and maintain records indicating that the TDP has been officially accepted by the Government. The records should document any deficiencies found in the TDP,

actions taken to correct the deficiencies, and any conditions of acceptance and approval by the Government.

d. Acceptance or Reflection. On completion of the final review, the Government reviewing activity shall notify the acceptance activity (listed on the CDRL) in writing, recommending acceptance or rejection of the TDP. A rejection recommendation shall include documented reasons. Nonconforming data in the TDP may serve as the basis for withholding contract payments as specified in the DFARS, Subpart 252.227-7030 or other contract requirements. The acceptance activity shall notify the contractor of the acceptance or rejection of the TDP. Final acceptance of the TDP is normally accomplished when the Government signs the DD Form 250, "Material Inspection and Receiving Report" and takes custody of the TDP. If the TDP is rejected, the acceptance activity shall notify the contractor in writing of the reasons for rejection. Formal notification that supplies do not conform with contractual requirements should be made by the contracting officer. In addition to providing the reasons why the data were not accepted, the contracting officer must direct the contractor to correct the deficiencies, replace the non-conforming data, or, when permitted by the contract, elect to receive an equitable adjustment in contract price in lieu of correction or replacement.